ABSTRACT OF THE DISCLOSURE

A system and method corrects luminance non-uniformity and increases the apparent amplitude resolution of an image generated by a projector. The projector, having a given number of stated levels, receives input data and projects images based on that data. To correct luminance non-uniformity, a projector correction look-up table (LUT) is created. The LUT attenuates the displayed image such that the whole image has the same luminance as the dimmest point. Input data received by the projector is modified by correction information contained in the LUT. The projector output is analyzed to identify the number of unique levels that the projector is capable of producing, which may be less than the number of stated levels. A dithering engine modifies the corrected image data to increase the projector's amplitude resolution, creating the illusion of the projector having more than the limited number of unique levels identified.

32